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ABSTRACT

A study examined the current outcomes and future of paraprofessional education provided under the auspices of South Australia's Department of Employment and Technical and Further Education (SA DETAFE). The primary objectives of the study were as follows: (1) determine whether an autonomous middle-level employment base exists in selected manufacturing and service industries in South Australia; (2) identify recent trends in that employment base and develop projections for the future; (3) examine related trends in middle-level occupations and the implications for middle-level training; and (4) assess the future of middle-level training and its administration. Detailed analyses of recent and future employment trends were conducted for those paraprofessional occupations that persons earning associate diplomas in accounting, mechanical engineering, or hospitality management would likely enter. Employer, community, and government acceptance of middle-level vocational training in South Australia was also analyzed. It was discovered that, in the past decade, middle-level training in TAFE has assumed new importance throughout South Australia and Australia as a whole. Enrollments have increased dramatically, and in view of the increasing emphasis on providing opportunities for career progression, increases in enrollments in middle-level TAFE courses seem likely to continue for the next 3-5 years. (MN)

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Paraprofessional education in SA DETAFE

PAUL MILLS &
JANINE CESNICH

Condensed report on:

Occupational outlets for middle-level training: What is the future of middle-level training?

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NCVER

Adelaide 1993

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Contents

1	Introduction	1
2	Community acceptance of middle-level training	4
2.1	Recognition of TAFE middle-level training in official occupational nomenclature	
2.2	Recognition of TAFE middle-level training in industrial awards prior to award restructuring	
2.3	Post award restructuring	
2.4	Enrolments in middle-level courses	
3	Labour market opportunities arising from middle-level training in TAFE	11
3.1	What has the micro-economic analysis demonstrated?	
3.2	Recent and likely trends in employment of SA DETAFE accounting graduates	
3.3	Recent and likely trends in employment of SA DETAFE mechanical engineering graduates	
3.4	Recent and likely trends in employment of hospitality managers in South Australia	
4	Analysis of the industry survey results	20
4.1	Purpose of industry surveys	
4.2	Selection of survey population: accounting	
4.3	Outcomes of the accounting industry survey	
4.4	Selection of survey population: mechanical engineering	
4.5	Outcomes of the mechanical engineering industry survey	
4.6	Selection of survey population: hospitality	
4.7	Outcomes of the hospitality industry survey	
5	Analysis of results of the graduate surveys	24
5.1	Outcomes of the survey of graduates from the SA DETAFE Associate Diploma in Accounting	
5.2	Outcomes of the survey of graduates from the SA DETAFE Associate Diploma in Mechanical Engineering	
5.3	Outcomes of the survey of graduates from the SA DETAFE Diploma in Hospitality Management	
5.4	Some general conclusions on the outcomes of the three graduate surveys	

6 Analysis of the outcomes of case studies of graduates from the three target SA DETAFE courses 29

6.1 Introduction
6.2 Purpose of the graduate case studies
6.3 Case study methodology
6.4 Basis of selection of case study participants
6.5 Accounting case studies
6.6 Mechanical engineering case studies
6.7 Hospitality management case studies
6.8 Some general conclusions concerning the outcomes of the case studies

7 Some implications arising from the preceding analysis 34

7.1 The extent of the employment base available to persons with middle-level TAFE training
7.2 The impact of award restructuring
7.3 Public and private sector employment practices
7.4 Recognition of prior learning
7.5 Possible alternatives to existing middle-level training in TAFE
7.6 Additional exit points/more full-time places
7.7 Articulation between TAFE middle-level training and university studies
7.8 Marketing of middle-level courses
7.9 Gender issues
7.10 Future research
7.11 Some final conclusions

1: Introduction

This study was undertaken by the National Centre for Vocational Education Research (formerly the TAFE National Centre for Research and Development) on behalf of the South Australian Department of Employment and Technical and Further Education (SA DETAFE).

Previous studies of TAFE middle-level training have paid little attention to the these employment base available to these middle-level graduates and the extent to which their training is 'well targeted' in terms of meeting industry's needs for suitably trained staff, and proving useful to graduates gaining employment in occupations where their vocational training is relevant. A special problem is that a level of training derived from the occupation 'engineering associate' has been applied to white collar and service industries without real labour market testing.

Middle-level employment (also termed paraprofessional level) may be defined as the occupational level between the technician or post-trade level and the professional level. The Australian Standard Classification of Occupations (ASCO) provides the following definition of a paraprofessional's duties:

> *Paraprofessionals perform complex technical duties requiring the understanding of a body of theoretical knowledge and significant practical skills.*
> *Occupations in this major group have level of skill commensurate with a 2-3 year certificate or associate diploma. Most Paraprofessionals receive some on-the-job training in addition to formal education.*
> *Duties performed by Paraprofessionals include conducting laboratory tests; operating and maintaining complex equipment; operating and supporting the operation of ships; providing skilled nursing care; enforcing the law; and inspecting establishments and sites to ensure conformity to government and industry standards. These duties are often performed in support of professionals.*

The present project was an extension of research previously undertaken by Guthrie and Loveder. In their report, entitled *Approaches to multiple entry and exit points for the associate diplomas,* Guthrie and Loveder (1990) examined what approaches were being taken, or could be adopted, to provide appropriate multiple entry and exit points for the associate diplomas and diplomas offered by the South Australian Department of Employment and Technical and Further Education. [Guthrie, H. and Loveder, P. 1990]

This project has four main aims:

- to determine whether an autonomous[1] middle-level employment base (i.e. the level for which associate diploma and diploma courses provide vocational training)[2] exists in selected manufacturing and service industries in South Australia;
- to identify recent trends in this employment base in South Australia and develop projections for the future;
- to examine related trends in middle-level occupations and the implications for middle-level training (e.g. the effects of award restructuring); and
- to discuss the future of middle-level training and review the administration of middle-level training.

Occupations where a detailed analysis of recent employment trends and future outlook has been provided include those broadly covered by the following three South Australian Department of Employment and Technical and Further Education courses:

- the Associate Diploma in Accounting;
- the Associate Diploma in Mechanical Engineering; and
- the Diploma in Hospitality Management.

The study includes analysis of the extent to which middle-level vocational training is recognised in:

- the Australian Standard Classification of Occupations (ASCO).
- existing industrial awards relating to the occupations under consideration.
- Broad trends in enrolments in associate diploma/diploma courses in recent years, both in South Australia and at the national level (and related changes in educational attainment), together with analysis of recent trends in employment in related occupations (i.e. ASCO Major Group 3, Paraprofessionals).
- More specific analysis of trends in enrolments in the three South Australian DETAFE associate diploma/diploma courses, under consideration, and analysis of recent and likely trends in employment in related occupations. The aim of these more detailed analyses is to concentrate discussion on longer term structural economic factors rather than short-term cyclical economic factors. Structural economic change will influence the main industries employing these graduates over the next 3-5 years and occurs as a result of more fundamental, longer term, irreversible and deterministic factors such as:
  - technological change resulting in a rapid and increasing rate of innovation in communications and computing technology, based on micro-electronics;
  - changes in consumer preferences; for example, more people are now eating in restaurants rather than at homes;
  - government policy decisions to reduce tariffs on products like footwear which confer a cost advantage to low-wage countries such as China.

(Cyclical economic change, by contrast, occurs as a result of short-term changes in the business cycle reflecting factors like seasonal influences or government policy intended to expand or contract

economic activity. For example, the 1990/91 economic downturn has occurred as a result of cyclical factors, particularly through changes in the Commonwealth Government's macro-economic policies).[3]

- Analysis of employers' perceptions concerning the existence of a discrete, autonomous employment base in South Australia for those with South Australian DETAFE associate diploma/ diplomas in accounting, mechanical engineering and hospitality management.
- Analysis of the likely impact of award restructuring on the existing employment base for those who have completed these middle-level DETAFE courses.
- Discussion of gender issues arising from the preceding analysis (e.g. existence of career opportunities for women in occupations traditionally dominated by men).

2: Community acceptance of middle-level training

Community acceptance of middle-level training can be tested in a variety of ways. Relevant questions include:

- Are occupations which require TAFE middle-level training accorded consistent nomenclature in official documentation?
- Are occupations which require TAFE middle-level training adequately defined in relevant industrial awards (including discussion of required middle-level training)?
- Are there significant and growing enrolments in middle-level TAFE courses?

This project has attempted to answer these questions by:

- reference to official Australian Bureau of Statistics official occupational nomenclature (ie the Australian Standard Classification of Occupations (ASCO);
- reference to relevant industrial awards; and
- through analysis of data on enrolments in middle-level training.

Subsequently, the next section, examines labour market opportunities arising from middle-level TAFE training.

2.1 Recognition of TAFE middle-level training in official occupational nomenclature

Occupations are placed into particular ASCO Major Groups based on an assessment nationally of level of skills required to undertake the specific occupation. For example, occupations in ASCO Major Group 1 Managers and Administrators, are regarded as more skilled than occupations in ASCO Major Group 2, Professionals, and Professional occupations are, in turn, viewed as being more highly skilled than occupations in Major Group 3, Paraprofessionals.[4] (By contrast, the previous system of occupational classifications used in Australia, the Classification and Classified List of Occupations (CCLO), defined occupations according to the goods and services produced by persons in an occupation, rather than on the skills needed to undertake the occupation).

The extent to which associate diplomas/diplomas are recognised in ASCO occupational definitions (and occupational definitions in industrial awards) is therefore an important test in determining whether an autonomous employment base exists for those undertaking middle-level training in TAFE. Recognition of associate diploma/diploma courses in broad occupational definitions in ASCO implies that discrete occupations exist. Conversely, failure by official occupational classifications and industry to recognise middle-level training in occupational definitions implies the opposite, i.e. that middle-level training is not seen as being relevant to occupational outcomes. This would cast

severe doubt on the existence of an independent, autonomous employment base for graduates of middle-level training.

The ASCO Dictionary of Occupations explicitly associates middle-level vocational training with Major Group 3 in ASCO, Paraprofessionals. This would appear to imply that associate diplomas/diplomas are recognised in official occupational definitions as the educational norm for entry to paraprofessional occupations, thereby establishing the existence of an employment base for associate diploma graduates.

It is, however, questionable whether the *ASCO Dictionary of Occupations* or DEET adequately defines either the term *paraprofessional* or adequately describes the vocational qualifications required to work at this level. Indeed, the treatment of middle-level training is somewhat confusing.

Occupations appropriate to middle-level training are not well defined, in broad terms, in ASCO. While ASCO suggests that middle-level training should lead to employment in the paraprofessional major group in ASCO, it is possible to become a paraprofessional with either lower or more advanced vocational training. In addition, some middle-level TAFE courses have occupational outcomes outside the paraprofessional major group in ASCO as the three target SA DETAFE courses under consideration in this report demonstrate: while the Associate Diploma in Mechanical Engineering seems likely to result in occupational outcomes within the paraprofessional major group in ASCO, this is *not* the case with the other courses. Outcomes in the Associate Diploma in Accounting can be as diverse as occupations classified in the professional major group in ASCO to those classified in the clerks' major group. Furthermore, the major likely occupational outcomes of the SA DETAFE Diploma in Hospitality Management are classified under the managers and administrators major group in ASCO.

> *Hence, it seems reasonable to conclude that broad occupational outlets for persons undertaking middle-level training in TAFE are not well defined in ASCO.*

2.2 Recognition of TAFE middle-level training in industrial awards prior to award restructuring

The main target occupations of this study include accountants, accounting clerks, mechanical engineering associates, technicians and hospitality managers, all of whom are graduates of the DETAFE Associate Diploma in Accounting, the Associate Diploma in Mechanical Engineering and the Diploma in Hospitality Management respectively. Numerous industrial awards cover these occupations.

It would appear that in relation to the majority of those employed in public practice in the accounting industry the occupation of accountant (and middle-level vocational training in accountancy) is not widely acknowledged in industrial award occupational classifications. There are,

however, significant numbers of persons employed as accountants outside the accounting industry (e.g. in commerce or in the South Australian State Public Service under Circular 27 issued by the Commissioner for Public Employment) who are exceptions to this generalisation.

Traditionally awards covering accounting clerks have not emphasised the vocational training necessary for employment in particular occupations. The occupational definitions under the Clerks' Club, Hotels and Motels Award, 1978 (South Australia) illustrate this. Vocational training requirements are not specified, i.e. the Associate Diploma in Accounting is not specified as a required or desired qualification for the occupation.

Mechanical engineering classifications, even prior to award restructuring, were relatively closely defined under the Metal Industry Award. For example, draughting, one occupational area filled by mechanical engineering associates was relatively well defined in Metal Industry awards prior to award restructuring. However, as pointed out by the Metal Trades Industry Association in *Award Restructuring in the Metal and Engineering Industry*, 'The current Metal Industry Awards . . . unsuitable . . . some impediments are . . .

(iv) the non-existence of any structured career paths;
(v) lack of training mechanisms'.[5]

In the hospitality industry in South Australia, management personnel are largely covered by the Hotel Management Staff (Federal Award) 1974. Prior to award restructuring, State hospitality awards did not highlight the vocational qualifications required to work in hospitality management positions or at lower classification levels. A similar position existed in regard to the Federal award. While the award defines the duties of various levels of managerial staff and thus establishes a basis for remuneration, it neither defines nor suggests the vocational qualifications required to work in hotel management positions.

Thus prior to award restructuring, occupations available subsequent to middle-level training were not well defined in those industrial awards relevant to SA DETAFE courses under consideration.

2.3 Post award restructuring

With award restructuring increased emphasis has been placed on middle-level TAFE vocational training in industrial awards. However in the accounting industry, since many accountants are not employed under award conditions, award restructuring has had a limited impact on this occupation.

Nevertheless, a significant proportion of graduates from the Associate Diploma in Accounting work in areas such as commerce, banking and government, areas which are covered by a wide variety of industrial awards, such as the Australian

Telecommunications Commission Administrative/ Clerical/ Executive Staff Award, the Bank of Queensland Award and the Commonwealth Bank Officers Award. Following award restructuring the Associate Diploma in Accounting is now recognised under the South Australian Public Service Award under Commissioner's Circular 27 for entry to middle-level accounting positions.

Thus, although many accounting personnel in general practice are not employed under industrial awards and are therefore not directly influenced by award restructuring processes, award restructuring has probably resulted in greater recognition of the Associate Diploma in Accounting in related industries, thus enhancing the 'legitimacy' of the employment base existing for persons with this qualification.

The process of award restructuring is relatively advanced in the metals industry, and there has been substantial agreement between employer groups and trade unions on the need for change. Essentially the new structure of the new award combines all previously existing components into a single structure of 14 classification levels based on a concept of a hierarchy of skills. A publication issued jointly by Metal Trades Industry Association of Australia, the Australian Chamber of Manufactures, and the Metal Trades Federation of Unions pointed out that:

> *The new classification structure is based on definitions which specify the skill, competency and training requirements for each classification level.*
> *The new classification structure provides definable career paths for employees. Through appropriate training and satisfaction of the skill and competency standards for each classification level, employees will be able to progress up the classification structure. Movement up the career path may involve cross-skilling or further specialisation.*[6]

The most recent version of the Federal Metal Industry Award (Sate Metal Industry awards are based in Commonwealth awards) available at the time of writing was that for April 1991, that is, post award restructuring. In the Federal Metals Industry Award the duties of particular classifications, the minimum training requirements for each classification and the wage relativity to the C1O classification (i.e. tradesperson) are now precisely defined.

The major award under which those working in South Australia's hospitality industry are employed is the Hotels, Clubs etc. Award, which has also been restructured. The new Hotels, Clubs etc Award makes explicit reference to the nature of training required to work at each level of occupational classification.

The Australian Hospitality Review Panel, a subsidiary of Tourism Training Australia, has issued a directory of training programs including TAFE training, for each skill level recognised under this

award. The Panel also has responsibility for matching programs against occupational levels. Typing occupational training conducted by TAFE to particular occupational classifications would therefore seem, in the hospitality industry at least, to 'legitimise' the existing employment base in relation to middle-level occupations.

However, while these new awards, make explicit linkages between training and occupational classifications ranging from introductory levels to advanced skill levels and supervisory skill levels, *they do not make reference to management classifications and training requirements*. These occupations are defined under the Hotel Managerial Staff Award, a Federal award, which has yet to be restructured. However, if the skill-based model used in restructuring State Awards is followed at a Federal level, the training requirements for particular occupational classifications are likely to be more closely specified than has been the case in the past.

In summary, with regard to the occupations under consideration, the process of award restructuring, with its emphasis on skills, competencies and training, has tended to consolidate the employment base for mechanical engineering associates and has the potential, once award restructuring is extended to hospitality management awards, to have a similar influence on the hospitality management occupations. Award restructuring appears likely, however, to have only a limited impact on the employment base available to accountants in public practice.

2.4 Enrolments in middle-level courses

The extent of community acceptance of middle-level training can also be gauged by recent changes in enrolments in middle-level TAFE courses and in the number of associate diploma/diploma holders.

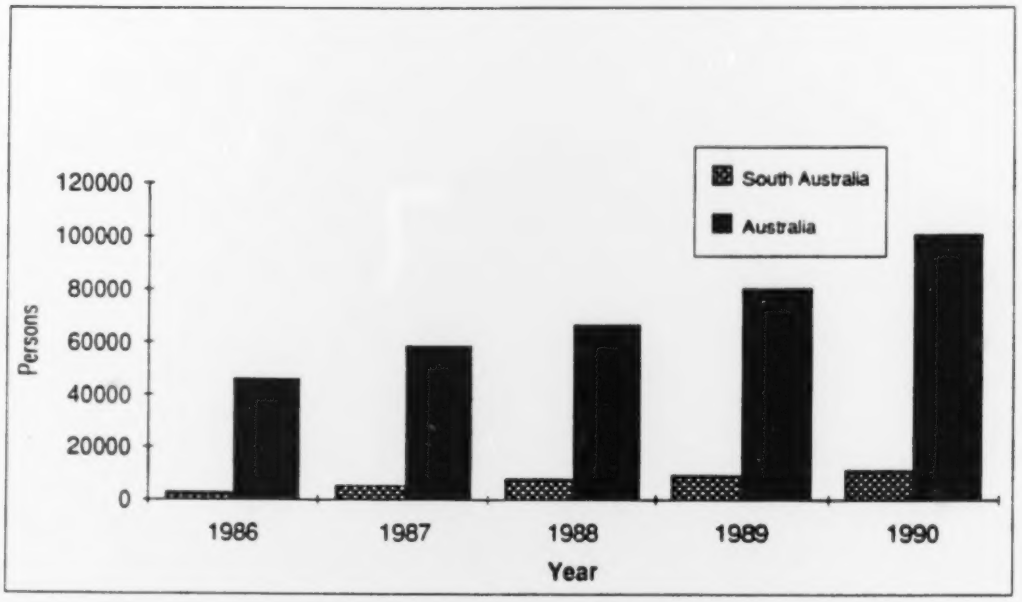
There appears to have been considerable growth in overall enrolments in associate diploma/diploma (or stream 3500/3600 courses) both in South Australia and nationally in recent years (although it is difficult to compare enrolments in different years between 1986 and 1991 due to refinements in data capture techniques in various States between 1986 and 1991). Nevertheless, the available data suggests that in South Australia, enrolments in stream 3500/3600 courses rose *threefold* between 1986 and 1990. In 1986, 2,751 students enrolled in associate diploma/diploma courses in South Australia; in 1990, 11,443 persons enrolled in TAFE associate diploma/diploma courses in South Australia.

As shown in Figure 1 below, there were also substantial increases in enrolments in TAFE stream 3500/3600 courses at the national level between 1986 and 1990, although the national rise in enrolments, while extremely rapid, was not quite as dramatic as that in South Australia. In 1986 there were 46,905 persons enrolled in associate diploma/diploma courses nationally; by 1990 there were 100,554 persons enrolled in TAFE's stream 3500/3600 courses.

That is, enrolments in associate diploma/diploma courses more than doubled over the short period between 1986 and 1990.

However, these statistics do tend to overstate the increase in enrolments at this level over the period 1986 to 1990. Associate diplomas only came into being in the mid-1980s, and many courses have subsequently been upgraded to this level and many new associate diploma courses have been developed. Notwithstanding, the available data suggests there has been a major increase in enrolments in associate diploma/diploma courses in South Australia in the past five years, a perspective supported by anecdotal evidence from college teaching staff. In addition, a substantial proportion of the increase in enrolments appears likely to have arisen from increased enrolments in the Associate Diploma in Accounting.

Figure 1: **Growth In TAFE enrolments in stream 3500/3600 (associated diploma/ diploma) courses between 1986 and 1990, South Australia and Australia**



Source: National Centre for Vocational Education Research, unpublished data.

3: Labour market opportunities arising from middle-level training in TAFE

This report attempts to consider the question of available labour market opportunities for persons with middle-level TAFE vocational training in South Australia by reviewing recent and prospective trends in employment at the broad level (paraprofessionals) and specifically in the context of the target occupations. The discussion relating to the latter has been based on an analysis of longer term underlying trends in those industries employing graduates while the analysis of future trends in paraprofessional employment relies on State and national econometric models which provide forecasts of likely changes in employment.

The necessity for analysing underlying trends in those industries where SA DETAFE associate diploma/diploma holders are generally employed reflects the fact that occupational demand is a derived demand, where demand for a particular occupation involving particular skills (e.g. mechanical engineering associates) is derived from demand for the goods and services produced by those industries where these persons are largely employed (i.e. manufacturing industry in the case of mechanical engineering associates). Hence, to develop projections of likely changes in employment in particular occupations, it is first necessary to understand likely trends in those industries.

In this report projections of likely future changes in employment in the occupations under discussion have been constrained to a 3-5 year time limit, reflecting the view that, in a period of rapid structural economic change, longer term projections would seem likely to be of limited use in a policy planning context.

3.1 What has the micro-economic analysis demonstrated?

The micro-economic analysis in the previous chapter has demonstrated that a substantial employment base already exists for paraprofessionals both in South Australian and nationally. Most persons undertaking TAFE middle-level training in the Australian Standard Classification of occupations are employed in a paraprofessional occupation which accounts for roughly 6 per cent of total employment in South Australia and nationally). Paraprofessional employment has also increased relatively rapidly in South Australia and nationally in recent years.

It is possible, however, to enter a variety of paraprofessional occupations without undertaking TAFE middle-level training: paraprofessional status is also possible by undertaking lower level vocational training or by undertaking training at university). At the national level, employment has not risen rapidly in recent years in those paraprofessional occupations where TAFE provides

middle-level training. Econometric projections in a DEET publication, *Australia's Workforce in the Year 2001*, suggest that this situation will continue in the next 3-5 years (see Table 1 below).

Table 1: Australia, changes in employment of paraprofessionals, between August 1987 and August 1991, less employment of nurses, police, and miscellaneous paraprofessionals (all persons)

Year	Para-professionals	Less Nurses, Police, Misc.	Net Para-professionals
1987	442347	310200	132147
1988	446846	308097	138749
1989	453800	323468	130332
1990	471892	334850	137042
1991	478221	338784	139437

Source: Australian Bureau of Statistics, Labour Force Survey data on microfiche.

In contrast to the national experience, employment has risen rapidly in South Australia in recent years in those paraprofessional occupations where SA DETAFE provides middle-level training. However, it seems likely that this situation will change in the next 3-5 years and growth in employment in paraprofessional occupations in South Australia will mirror national trends (i.e. growth in employment in those paraprofessional occupations where SA DETAFE provides middle-level training will be slower than in those paraprofessional occupations where SA DETAFE does not provide middle-level vocational training) (see Table 2 below).

Table 2: South Australia, changes in employment of paraprofessionals, between August 1987 and August 1991, less employment of nurses, police, and miscellaneous paraprofessionals (all persons)

Year	Para-professionals	Less Nurses, Police, Misc.	Net Para-professionals
1987	37929	27355	10574
1988	42878	30984	11894
1989	42015	30944	11071
1990	39541	26793	12748
1991	40278	28392	11886

Source: Australian Bureau of Statistics, Labour Force Survey Data on Microfiche

The data available in relation to paraprofessional employment growth suggests there has been significant growth in employment rates both in South Australia and nationally in recent years. Econometric models suggest significant continued growth in employment is likely in this ASCO Major Group both in South Australia and nationally in the next 3-5 years.

However, more disaggregated data in relation to occupations where TAFE is likely to provide middle-level training presents a somewhat different picture. While employment of persons in this group has grown substantially in South Australia in recent years, this has not been the case at the national level, and econometric models suggest relatively slow growth in employment is likely in these occupations both in South Australia and nationally over the next 3–5 years.

3.2 Recent and likely trends in employment of SA DETAFE accounting graduates

There is no single clear occupational outcome available to graduates of the SA DETAFE Associate Diploma in Accounting. Occupational opportunities in accounting fields can range from independent professional activity to paraprofessional support to persons with tertiary qualifications (i.e. university degrees) to clerical activities.

Reflecting this potential diversity of occupational outcomes for accounting graduates, the following analysis reviews recent and prospective employment trends in South Australia *for all levels of accounting personnel.*

Although accountants are employed in a wide variety of industries throughout the South Australian economy, the main source of employment of accounting personnel in the South Australian economy is within the finance and business services industry, (especially in the legal and accounting areas).

3.3 Recent and likely trends in employment of SA DETAFE mechanical engineering graduates

Recent and likely trends in South Australia's manufacturing sector are discussed in this section since such trends will significantly influence demand for mechanical engineering associates. Recent trends in employment of associates are subsequently discussed.

South Australia has a substantial manufacturing industry. In 1989/90 the State's manufacturing sector contributed 18.4 per cent of South Australia's Gross State Product (latest data available at the time of writing).[7]

Table 3 below presents disaggregated data on employment, wages and salaries, turnover and number of establishments in relation to South Australia's manufacturing sector in 1989/90. In terms of employment and turnover, the most important sub-divisions in South Australia's manufacturing sector are the transport equipment, food beverages and tobacco, and other machinery and equipment industries.

In the past decade, however, South Australia's manufacturing sector has been under sustained pressure to restructure its operations and become more efficient in order to compete more effectively in domestic and overseas markets.

Table 3: Characteristics of South Australia's manufacturing sector, 1988/89

Industry	Employ-ment (No.)	Turn-over ($mill)	Wages and Salaries ($mill)	No. of Establish-ments
Food, beverages and tobacco	16471	2482.2	349.6	450
Textiles	2520	379.6	55.3	59
Clothing & footwear	4232	274.8	73.7	140
Wood, wood products and furniture	8459	749.1	156.4	595
Paper, paper products, printing and publishing	8054	842.6	199.6	330
Chemical, petroleum and coal products	2361	516.4	62.8	63
Non-metallic mineral products	3989	554.2	96.6	165
Basic metal products	7697	1444.7	218.5	57
Fabricated metal products	9258	875.5	184.2	584
Transport equipment	18868	2891.0	445.1	203
Other machinery and equipment	15596	1426.3	334.8	486
Misc. manufacturing	7558	752.0	156.7	323
Total Manufacturing	105063	13188.4	2333.3	3455

Source: Australian Bureau of Statistics, *Manufacturing, South Australia, 1988/89* Cat.No. 8209.4.

Consequently, South Australia's manufacturing sector has not grown as rapidly as other areas of the State economy in the past decade. In constant 1984/85 prices, growth in output (gross product) in South Australia's manufacturing sector between 1979/80 and 1989/90 averaged 0.9 per cent a year, compared with 3.2 per cent a year average growth in Gross State Product between 1979/80 and 1989/90.[8]

Reflecting the lower rate of growth in the manufacturing sector vis-a-vis other areas of the State economy, the contribution of the

manufacturing sector to Gross State Product (at factor cost) declined from 20.1 per cent in 1979/80 to 18.4 per cent in 1989/90.

Similarly employment declined steadily in South Australia's manufacturing sector between 1971 and 1986, a period when South Australia's manufacturers generally struggled to become internationally competitive, feeling pressure especially from the newly industrialised countries of North Asia. More recently in the period between August 1987 and August 1991 as shown in Table 4 below, employment has increased in South Australia's manufacturing sector. Indeed, during this period employment increased more rapidly in the manufacturing sector (7.9 per cent) than in the State economy as a whole (5.9 per cent). However, employment did not increase consistently in this sector in the period between August 1987 and August 1991. While manufacturing employment increased markedly in Australia during this time (a period of relatively strong growth in the national and State economies), more recently employment has declined in the manufacturing sector (reflecting the impact of the recession). However, notwithstanding the recent decline in employment in this industry, South Australia's manufacturing employment was still significantly higher in August 1991 than in August 1987.

Table 4: Changes in employment in South Australia's manufacturing sector between August 1987 and August 1991

Year	Males	Females	Persons
1987	76244	22152	98396
1988	81227	23578	104805
1989	88892	31126	120018
1990	85069	26871	111940
1991	78677	26909	105586

Source: Australian Bureau of Statistics, Labour Force Survey data, unpublished data on microfiche.

In summary, there appears to be an ongoing, reasonably well defined employment base (both in ASCO and in relevant industrial awards) available to graduates of the SA DETAFE Associate Diploma in Mechanical Engineering. However, according to ABS data the number of persons employed as mechanical engineering associates in South Australia has declined markedly in recent years. Further, the main industry in which mechanical engineering associates appear likely to be employed, the manufacturing sector, has grown relatively slowly in recent years in South Australia. Given South Australia's heavy reliance on the transport equipment industry, which faces significant pressure to restructure in the next 3–5 years, future demands in this occupation are somewhat uncertain. 'While replacement demand has apparently been

relatively high in the past, the depressed economic outlook in South Australia seems likely to reduce movement out of this occupation. Supply of mechanical engineering associates (both from SA DETAFE and the University of South Australia) is relatively high. However, recent State Government initiatives to encourage updating of manufacturing plant and machinery could enhance demand for mechanical engineering associates.

3.4 Recent and likely trends in employment of hospitality managers in South Australia

Demand for hospitality management personnel reflects demand in the industry itself.

There is no precise, commonly accepted definition of the 'hospitality industry'.[9] For the purpose of this report, the industry includes the accommodation and bar industries, the cafés and restaurants industries, licensed clubs, convention centres and tourist attractions.

South Australia's substantial hospitality industry has grown significantly in the past decade with the addition of several new international class hotels and the development of new tourist attractions. Major new hotels which have commenced operation in the past decade include the Adelaide Hilton, the Terrace, the Hindley Parkroyal, the Hyatt Regency Adelaide and the Ramada Grand. In addition, many existing hotels have been substantially refurbished and updated and include the Henley on Royal, Directors, the Unley on Clyde, Oxford, Astor and Green Dragon hotels. Adelaide also has a significant restaurant industry. Well known restaurants include Ayers House, Drumminor in the North East, Nediz Tu, the Pheasant Farm, Paul's Seafood Restaurant, the Starlight Room at Windy Point, and the Pullman Restaurant at the Adelaide Casino. Newer restaurants of note include Chloe's and Jarmers. In 1987 the first major purpose-built convention centre in Australia was opened in Adelaide. The Adelaide Convention Centre is capable of accommodating meetings for up to 3500 delegates.

South Australia's hospitality industry has also benefited from the development of several major new tourist attractions in the past decade. Attractions established in the past decade include the Australian Formula One Grand Prix, the Adelaide Casino, the Myer-Remm development in Rundle Mall and the recently opened Adelaide Entertainment Centre. These new ventures have augmented traditional tourist attractions such as South Australia's wine industries (including vintage festivals in the Southern Vales, the Barossa and Clare), and the biennial Adelaide Festival of Arts.

Some indication of the size of South Australia's hospitality industry may be gained from data concerning licensed premises in South Australia. As shown in Table 5 below, at 30th June 1991 a total of 3238 licensed premises existed in South Australia. Excluding wholesale and retail liquor licences and producers' licences, 2761 licensed premises in the State offered hospitality services, including

628 licensed hotels, 618 licensed restaurants, and vast numbers of unrestricted and restricted clubs.

Table 5: Licensed premises in South Australia as at 30th June 1991

Category	No.
Hotel	628
Residential	133
Wholesale liquor merchant	113
Retail liquor merchant	159
Entertainment venue	37
Restaurant licence	618
Restaurant BYO	37
Producers licence	205
Unrestricted clubs	321
General facility	147
Restricted clubs	840
Total	3238

Source: Australian Hotels Association, (1991), *Australian Hotelier* February 1991, p.144

In its Economic Briefing describing the South Australian economy in March 1992 the Centre for South Australian Economic Studies stated:

> *There is no question that tourism is an important and growing contributor to the Australian and South Australian economies. Tourism SA estimates that tourism in South Australia accounts for $1.6 billion of expenditure, and sustains over 30,000 jobs. This $1.6 billion incorporates the expenditure of international and interstate visitors to South Australia, and that of South Australians travelling within the state. One of the advantages of the tourism industry in comparison to the contribution of other industries, is that activity is concentrated in small businesses with a significant geographic spread (and particularly a non-metropolitan influence). It also has a high labour content and offers employment opportunities for a range of non-traditional skills.*

The tourism industry, including the hospitality sector, is therefore a significant contributor to the South Australian economy.

Looking ahead, the following factors are likely to have a positive influence on the South Australian hospitality industry in the next 3-5 years:

- anticipated continued strong growth in international and domestic tourism and convention attendance;

- the development of additional tourist attractions and the continuation of major established attractions such as the Australian Formula One Grand Prix and the Adelaide Festival of Arts;
- moves by many South Australian hotels to accommodate changing consumer tastes and preferences by moving upmarket, with improved decor and greater emphasis on quality food.

However, these positive influences will be offset, to some degree, by:

- anticipated poor economic growth in the short-term as the economy struggles to recover from the 1990/91 recession;
- limited population growth in South Australia.

At the present time it appears unlikely that there will be significant growth in the national or South Australian economies in the next 12-18 months. The international outlook is poor, with simultaneous economic downturns in the United States, the United Kingdom and Japan, tending to reduce the rate of growth of Australia's exports. In addition, while national gross domestic product has now increased, albeit modestly, in seasonally adjusted terms for four successive quarters and housing activity is improving, suggesting the national economy may be beginning to recover from the 1990-92 recession, as yet there have been few signs of a *sustained* improvement in the national economy, with investment expenditure, in particular, currently being at relatively low levels.

The relatively adverse short-term economic outlook suggests that the South Australian hospitality sector is unlikely to experience any significant increase in activity in the short-run.

In summary, it therefore seems unlikely that *new* demand for hospitality management personnel will increase markedly in South Australia in the next 3-5 years, reflecting both the effects of the 1990/91 recession on the industry as well as major increases in capacity at the top end of the market during the 1980s. However, although increases in capacity utilisation as the economy recovers from the 1990-92 recession in major hotels could also tend to create new demand for hospitality management personnel since it would appear that these hotels are currently being staffed at minimum levels.

Replacement demand is likely to continue to be significant, as hospitality managers frequently tend to work long and irregular hours, with constant shift work, which, according to industry sources, tends to lead to significant labour turnover due to 'burnout'.

Supply of hospitality management personnel from Regency College of TAFE is relatively low, particularly since many graduates tend to move interstate or go overseas after completing their courses. However, anecdotal evidence suggests that major hotels frequently recruit management staff from overseas. Anecdotal evidence also

suggests that, at the lower end of the market (i.e. small hotels and restaurants), on-the-job experience, rather than completion of hospitality management qualifications, is seen as the normal means of entry to management positions in South Australia's hospitality industry.

The major question which arises is not so much the adequacy of supply of graduates from Regency College to meet employers demands so much as the willingness of South Australia's hospitality sector to employ local, highly trained hospitality management personnel.

In addition, with the exception of the major hotels, the hospitality industry is characterised by a large proportion of small businesses (e.g. the Bureau of Tourism Research estimated that nationally in 1987 87 per cent of establishments in the hospitality industry employed less than 20 persons[10]). These small businesses are frequently managed by their owners, who learnt their skills 'on the job' and who may have limited knowledge of the training received by Diploma in Hospitality Management graduates and hence may not seek such graduates as employees.

4: Analysis of the industry survey results

4.1 Purpose of industry surveys

The three industry surveys which form part of this project were intended to provide information on the *attitudes* of South Australian employers towards the three target SA DETAFE middle-level courses. Pertinent questions include:

- Are South Australian employers willing to employ SA DETAFE graduates from the three target courses?
- Do South Australian employers value their employees' SA DETAFE vocational training?
- How do employers regard SA DETAFE training vis-a-vis university training?
- Do South Australian employers actively seek persons with TAFE middle-level training when recruiting?
- Are South Australian employers willing to use SA DETAFE as a training provider in the future in respect to the three target courses?

4.2 Selection type of survey population: accounting

The survey population was drawn in broadly equal quantities from the South Australian finance, property and business services industry and from SA industry in general. The survey population from the finance property and business services industry (including the accounting industry) was drawn from Yellow Pages listings of the telephone directory.

A decision was made to select a survey population which included both likely employers (by reference to Yellow Pages listings) across a broad spectrum of industry and known employers of SA DETAFE accounting graduates. The advice of the National Institute of Accountants was sought to locate firms known to employ associate diploma holders outside the finance, property and business services division. Finally, selected substantial firms from other areas of the state's economy were selected.

In this way, it was hoped to attract the views of a wide variety of potential and known employers of SA DETAFE associate diploma holders, from not only the financial services industry but also the wider State economy, ranging from small businesses to major firms, with representation from both the public and private sectors.

Ultimately 404 survey questionnaires relating to the SA DETAFE Associate Diploma in Accounting were forwarded (the project profile called for 400 survey questionnaires). One hundred and seventy one organisations responded, an adjusted response rate of 43.4 per cent.

4.3 Outcomes of the accounting industry survey

This section of the report has reviewed the results of the accounting industry survey. The survey results indicate that:

- while most survey respondents came from the finance, property and business services industry division a reasonable number of responses were received from other industries, especially the manufacturing, wholesale and retail trade and recreation and personal services industry;
- a significant proportion of respondents employed persons who had completed or were undertaking the SA DETAFE Associate Diploma in Accounting;
- survey respondents had commonly used SA DETAFE vocational training in the past, largely via scheduled courses;
- the majority of survey respondents were 'well informed' or 'partly informed' about the SA DETAFE Associate Diploma in Accounting, although they generally had a more limited knowledge of other SA DETAFE accounting courses;
- most survey respondents expressed satisfaction at the content of subjects in the SA DETAFE Associate Diploma in Accounting and did not suggest the addition of extra subjects in the course;
- survey respondents generally preferred the existing, accredited and broad-based SA DETAFE course to an alternative of short, industry-specific non-award courses;
- survey respondents' satisfaction with SA DETAFE vocational training, by comparison with university training in accounting, was relatively high;
- most survey respondents were willing to use SA DETAFE vocational training in the future;
- however, despite their generally favourable views of SA DETAFE vocational training in accounting, most survey respondents do not seek TAFE graduates when recruiting accounting personnel, and most survey respondents favoured hiring experienced accounting staff rather than seeking out qualified staff.

4.4 Selection of survey population: mechanical engineering

The manufacturing sector is the main industry where mechanical engineering associates are employed in South Australia. Therefore the survey population was drawn from *Yellow Pages* listings of South Australian manufacturing firms.

To some degree, employment of mechanical engineering associates is concentrated in certain manufacturing industries, notably the transport equipment, basic metal products and fabricated metal products industries. Therefore, while the survey population of 381 organisations included representatives of all industry divisions in the State's manufacturing sector, the selection of the survey population focussed on the major employers of mechanical engineering associates. In addition, certain known major public sector employers of technical support staff such as Australian National, the E&WS and SAGASCO were included in the survey population.

4.5 Outcomes of the mechanical engineering industry survey

The results of the mechanical engineering industry survey suggest that:

- the overwhelming majority of survey respondents came from the South Australian manufacturing sector;
- survey respondents employed in total over 36000 people. Survey respondents are hence substantial employers in a South Australian context;
- some 42.4 per cent of survey respondents indicated that the Associate Diploma in Mechanical Engineering was referred to in occupational definitions in industrial award(s) to which they were a party;
- a minority of respondents employed persons who had completed an Associate Diploma in Mechanical Engineering;
- survey respondents were generally reasonably well informed about the Associate Diploma in Mechanical Engineering although their knowledge of lower level SA DETAFE engineering courses was more limited;
- the majority of respondents had used SA DETAFE training through existing courses, workplace training provided by TAFE staff, TAFE consultancy services, or tailored training;
- respondents to the survey generally agreed that existing subjects in the SA DETAFE Associate Diploma in Mechanical Engineering covered the required material in suitable depth;
- *however most survey respondents felt training in additional areas was necessary;*
- most survey respondents favoured short courses rather than the existing courses;
- despite this, survey respondents largely accept the SA DETAFE Associate Diploma in Mechanical Engineering vis-a-vis university training in mechanical engineering;
- and most survey respondents would be willing to use SA DETAFE to train their mechanical engineering staff in the future;
- *however, despite the generally positive views expressed by survey respondents concerning SA DETAFE training in mechanical engineering, most survey respondents do not seek persons holding a SA DETAFE Associate Diploma in Mechanical Engineering when recruiting new staff or promoting existing staff;*
- moreover, most survey respondents indicated they seek experienced workers, rather than persons holding formal qualifications when recruiting new staff or promoting existing staff.

4.6 Selection of survey population: hospitality

The hospitality survey population was drawn from South Australian hospitality providers from listings in the *Yellow Pages* and included hotels, motels, restaurants, convention centres and licensed clubs.

The *Yellow Pages* listings indicated there were around 1200 businesses in these categories in South Australia. The survey mailing list was compiled from the *Yellow Pages* listings by:

- culling out small business which were known to be owner-managed and were thus unlikely to provide a significant market

for employment of hospitality management graduates;
- focussing on hospitality providers, e.g. major hotels, convention centres, which seemed more likely to provide employment opportunities for those undertaking the Diploma in Hospitality Management.

4.7 Outcomes of the hospitality industry survey

The hospitality industry survey results indicate that:
- most survey respondents come from the hospitality industry;
- survey respondents indicated that in relation to their employees, male employment was generally full-time, while female employment was generally casual or part-time;
- a common misconception amongst survey respondents was that the Diploma in Hospitality Management was referred to in occupational definitions in industry awards;
- 30.8 per cent of respondents stated they employed persons who had completed the SA DETAFE Diploma in Hospitality Management;
- survey respondents generally viewed themselves as well informed about the SA DETAFE Diploma in Hospitality Management;
- only a minority of survey respondents had previously used SA DETAFE for vocational training of hospitality staff;
- the majority of survey respondents indicated that the SA DETAFE Diploma in Hospitality Management provided 'reasonable' or 'good' knowledge of required subject areas. However, a majority of survey respondents suggested training was necessary in additional areas;
- the majority of survey respondents indicated they would prefer short courses on topics of interest to them rather than the existing course;
- despite this, most survey respondents suggested the SA DETAFE Diploma in Hospitality Management compared favourably with university hospitality training;
- the majority of survey respondents indicated they would use SA DETAFE to train hospitality management staff in the future;
- *however, as was the case in both the accounting and mechanical engineering industry surveys, respondents to the hospitality industry survey did not actively seek persons holding the Diploma in Hospitality Management when recruiting new staff or promoting staff and sought experienced staff rather than staff with academic qualifications.*

5: Analysis of results of the graduate surveys

The purpose of the surveys of graduates from the three SA DETAFE courses under consideration was to provide information concerning graduates' labour market experiences upon completion of their SA DETAFE courses. Information of this nature is generally not available from official sources such as the Australian Bureau of Statistics. The surveys provide information about issues such as graduates' employment status, and whether they were employed (if employed) in occupations related to their vocational training through SA DETAFE. In addition, through the surveys it has been possible to develop a profile of SA DETAFE graduates in terms of characteristics such as age, ethnic origins and educational attainment prior to commencing TAFE studies.

The response rates to the three graduate survey questionnaires have been pleasing. In part this reflects the extensive efforts of NCVER staff to verify graduates' addresses, e.g. by reference to electoral rolls. Response rates to the individual graduate questionnaires are shown in Table 6 below.

(The survey response was also relatively high by comparison with similar social surveys. A survey by the Queensland Bureau of Employment, Vocational and Further Education and Training achieved a 52.1 per cent response rate, while a survey of graduates from tourism and hospitality courses conducted by Tourism Training Australia achieved an adjusted response rate of 38 per cent in respect to South Australian hospitality and tourism graduates)

Table 6: Response rates to the graduate surveys

	Mechanical engineering	Hospitality management	Accounting
Population	200	111	222
Returns	128	54	169
RTS	22	21	7
Raw response rate	64.0%	48.7%	76.1%
Adjusted response rate	71.9%	60.0%	78.6%

Source: Survey data.

The relatively high response rates to the three graduate survey questionnaires suggest that it is reasonable to assume that the views of survey respondents are generally representative of the views of the total survey population with respect to each graduate survey.

5.1 Outcomes of the survey of graduates from the SA DETAFE Associate Diploma in Accounting

The survey population was therefore broadly in line with the requirements for graduate survey questionnaires set out in the project profile, which called for a survey of 200 graduates from each of the target SA DETAFE courses.

This survey sought to provide answers to the following questions:

- do SA DETAFE accounting graduates usually manage to enter employment after undertaking vocational training through SA DETAFE?
- is accounting graduates' employment usually related to their SA DETAFE studies?
- were SA DETAFE accounting graduates studies helpful in getting their jobs (if employed)?

The survey data overwhelmingly supports the conclusion that middle-level SA DETAFE accounting training is of assistance in gaining employment, and that SA DETAFE accounting graduates tend to use the knowledge and skills gained from their studies in their employment.

It is also of interest that a significant proportion of SA DETAFE Accounting graduates are relatively young, that most graduates have completed Year 12 and most graduates intend to undertake further studies, usually in accounting. This suggests that many survey respondents see undertaking an Associate Diploma in Accounting either as an alternative to university education or as a useful stepping stone to entering university.

Thus articulation between SA DETAFE accounting courses and university accounting courses in South Australia is an issue of major significance to many students and it is important that articulation policies be developed and widely promulgated to assist students to further their studies.

5.2 Outcomes of the survey of graduates from the SA DETAFE Associate Diploma in Mechanical Engineering

The survey population was drawn from graduates from the Associate Diploma in Mechanical Engineering from Regency College of TAFE in South Australia. Given that the aim of the survey was to test the labour market experiences of graduates upon completion of their studies, the survey population was drawn from 1986-1990 students, who had had greater exposure to the labour market than more recent graduates.

The survey population comprised 200 graduates (as required in the project profile). However there was only one female graduate from Regency College in the period from 1986-1990.

It appears that the majority of respondents to the mechanical engineering graduate survey are employed. In fact, many survey respondents were employed *prior* to commencing their SA DETAFE mechanical engineering studies.

In part, the employment status of many mechanical engineering graduates prior to commencing their studies is reflected both in the average age of graduates and in the reasons given by survey respondents for undertaking studies with SA DETAFE. Respondents to the mechanical engineering graduate survey were generally older than graduates from the SA DETAFE Associate Diploma in Accounting, and the most common reason given for undertaking middle-level engineering studies though SA DETAFE was to get a better job.

Most respondents to the mechanical engineering survey considered themselves to be paraprofessionals, and most respondents worked in South Australia's manufacturing sector.

The majority of survey respondents considered their SA DETAFE studies had been beneficial to their gaining their present positions. Moreover, most respondents found their studies relevant to their position, using a large proportion of the knowledge from their course in their job.

The majority of respondents to this survey indicated they intended to undertake further study. The majority indicated they wished to continue to study at TAFE.

5.3 Outcomes of the survey of graduates from the SA DETAFE Diploma in Hospitality Management

The choice of survey population for the hospitality survey questionnaire was slightly problematic in that it represents a compromise between availability of data, the criteria set out in the project profile, (which calls for a survey population of 200 for each of the graduate surveys) and the desire to include only graduates who had had time to gain employment.

More difficulties were due in part to the Diploma in Hospitality Management being a relatively new award: to date there have not been large numbers of graduates. Furthermore, Regency College had difficulty in accessing data for graduates prior to 1989.

Ultimately, a survey population of 111 graduates emerged. Most respondents had completed their studies in 1990 or 1991. Many graduates therefore have not had significant opportunities to develop their careers.

As was the case with the surveys of accounting and mechanical engineering graduates, it appears that most SA DETAFE hospitality management graduates are employed, although a relatively high proportion of hospitality management graduates are employed on a casual basis.

The hospitality management graduate survey data supports the conclusion that completion of the Diploma in Hospitality Management has assisted a significant proportion of graduates to attain employment. The vocational qualification would appear to be of significance since most of the survey respondents were

relatively young (aged 20-24) and hence would seem likely to have limited employment experience.

(These findings are, generally speaking, consistent with those from an earlier study of labour market and educational outcomes of tourism and hospitality courses conducted by the Tourism Training Authority.)

Most survey respondents also indicated that their vocational training was relevant to their employment, and that they used a substantial proportion of the skills and knowledge from their vocational training in the course of their work.

A significant proportion of survey respondents indicated they intended to undertake further study, generally at university, although most respondents indicated that their future studies would not be in a hospitality-related area.

5.4 Some general conclusions on the outcomes of the three graduate surveys

It is obviously difficult to make *general* conclusions about the overall outcomes of three surveys of graduates from three courses as disparate as the three middle-level courses under discussion. Nonetheless, an attempt is made here to draw together some of the common experiences of graduates from the Associate Diploma in Accounting, the Associate Diploma in Mechanical Engineering and the Diploma in Hospitality Management. It is hoped that valid conclusions can be drawn not only in relation to the three target SA DETAFE courses, but also with regard to wider provision of middle-level training by SA DETAFE.

As stated earlier, this analysis has primarily attempted to address questions such as: whether graduates from the target courses are employed; on what basis they are employed (i.e. full-time, part-time or casual); whether their studies assisted them in gaining employment (if employed); and whether graduates' studies are relevant to their work. Graduates' further study intentions have also been an area of interest.

The three graduate survey questionnaires have tended to suggest that:

- the employment patterns of graduates from the three courses reflect those of the wider South Australian community (i.e. unemployment amongst graduates from the target courses is not excessive) although a relatively large proportion of hospitality graduates were employed on a casual basis. In addition, many graduates who were employed in their current position after commencing their studies, would not be employed in their present position without their middle level vocational training;
- graduates' middle-level vocational training has commonly assisted them to gain employment;
- generally speaking, a substantial proportion of graduates from these three courses found their studies relevant to their work, and use a substantial proportion of the knowledge and skills

gained from their training during the course of their work.

It is also noteworthy that many graduates from the three target courses intend to undertake further study, generally at university (although most mechanical engineering graduates intended to continue to study within SA DETAFE). It is therefore important that articulation issues be addressed to ensure that SA DETAFE students receive credit for their middle-level studies in an orderly, consistent fashion, rather than on an *ad hoc* basis.

6: Analysis of the outcomes of case studies of graduates from the three target SA DETAFE courses

6.1 Introduction

The following case studies were based on interviews with graduates from the three target SA DETAFE courses, the Associate Diploma in Accounting, the Associate Diploma in Mechanical Engineering and the Diploma in Hospitality Management.

6.2 Purpose of the graduate case studies

The graduate case studies were intended to augment the information available from the industry and graduate surveys. The case studies provide an opportunity for a more detailed analysis of the labour market experiences of those who graduated from their courses some time ago. In this way the contribution of SA DETAFE middle-level training to longer term career development can be assessed.

6.3 Case study methodology

Intensive interviews based on a pre-prepared schedule of questions were conducted with selected graduates. All case study participants were asked the same questions (although graduates were also encouraged to provide further information, if desired).

6.4 Basis of selection of case study participants

Case study participants were selected according to a number of criteria. These criteria included:

- willingness to participate in the case studies;
- gender balance - it was intended to examine both male and female career progression to compare the contribution of SA DETAFE middle-level training;
- career progression - participants in the case studies were longer term graduates who had experienced greater opportunities to develop their careers (although for graduates from the Associate Diploma in Accounting and the Diploma in Hospitality Management this was more difficult given the recent development of these courses).

6.5 Accounting case studies

Case study interviews were conducted with five graduates from the Associate Diploma in Accounting. Of the graduates interviewed, two were employed by major financial institutions, one by a major accounting firm, and two were employed by major private national companies.

Actual positions held by graduates included those of auditor, accountant, commercial accounts manager, clerk and graduate within accounting support staff.

Four of the five graduates were employed on a full-time basis. Only one graduate was employed part-time. Two of the graduates interviewed were male and three were female.

Graduates were employed in companies which varied significantly in terms of size (indicated by employee numbers). Most accounting graduates were employed in companies with approximately 50-200 employees. However some accounting graduates interviewed during the case studies worked in companies employing between 1500-2000 people.

The accounting case studies indicated:

- that most case study participants undertook the accounting course to improve career prospects;
- while the Associate Diploma in Accounting was generally relevant to case study participants' employment, on-the-job training was also important;
- acceptance of the Associate Diploma in Accounting among employers of case study participants varied significantly;
- most accounting graduates are not employed under an industrial award;
- that most firms provided study assistance to case study participants;
- while most case study participants suggested industrial experience was a major factor in their employer's recruitment or promotional decision, their qualifications were also of assistance;
- while most case study participants' responsibilities have increased, formal promotions were rare;
- career opportunities arising from completion of the Associate Diploma in Accounting appear limited for most case study participants; and
- while some graduates' career expectations have been fulfilled, others feel the Associate Diploma in Accounting has not been of significant assistance in fulfilling their career aspirations.

6.6 Mechanical engineering case studies

Interviews were conducted with five graduates of the Associate Diploma in Mechanical Engineering. Of the graduates interviewed, one was employed by a small state-based engineering company, one by a major public organisation, two by major national/ international companies involved in the production of defence related equipment and one was employed by a major national, heavy engineering firm.

Actual positions held by graduates interviewed included a senior drafting officer, a drafting officer, two technical officers and a senior subcontractor administrator.

Four of the five graduates were employed on a full-time basis. Only one graduate was employed on a casual basis. Four of the graduates interviewed were male and one was female.

Graduates were employed in companies which varied notably in terms of size (indicated by employee numbers). Two SA DETAFE mechanical engineering graduates were employed in companies with approximately 5-30 employees. The other three mechanical engineering graduates interviewed during the case studies worked in companies employing between 600-2500 people.

The mechanical engineering case studies indicate:

- most mechanical engineering case study participants, like accounting counterparts undertook the course to improve their career prospects;
- most mechanical engineering case study participants found their Associate Diploma in Mechanical Engineering highly relevant to their position;
- case study participants suggested the course is well accepted by employers;
- most SA DETAFE mechanical engineering graduates are not employed under an industrial award;
- case study participants were provided with study assistance by both past and present employers;
- while employers of case study participants recognised the importance of formal qualifications, on the whole they tend to believe that on-the-job training is the most important criteria for career advancement;
- while formal qualifications are recognised as being important by employers, on-the-job training tended to be the most important criteria for career advancement;
- while a number of case study participants had been formally promoted others only had their areas of responsibility increased;
- for the majority of case study participants, career opportunities are either limited or non-existent at present;
- a few case study participants felt that their career expectations had been partially if not wholly realized. Others felt that the SA DETAFE Associate Diploma in Mechanical Engineering had not been of significant assistance in fulfilling their career aspirations; and
- while all firms had an equal opportunity policy, the number of females employed in technical areas is limited or in some cases, non-existent.

6.7 Hospitality management case studies

Case study interviews were conducted with five graduates from the Diploma in Hospitality Management. One graduate was employed by a private national beverage supply company, two in higher quality hotel/motels, one worked in the wholesale and retail trade, and one was employed by a private state-based company involved in the property and business services industry.

Actual positions held by graduates included those of shop supervisor, silver service waitress, relief supervisor/table attendant, office manager and graduate without a formal title but responsible for carrying out a wide variety of different functions.

Three of the five graduates were employed on a full-time basis; two were employed on a part-time/casual basis; two graduates were male and three were female.

Graduates were employed in companies which varied significantly in terms of size (indicated by employee numbers). Most hospitality management graduates were employed in companies with approximately 5-40 employees. However some hospitality management graduates interviewed during the case studies worked in companies employing between 60-900 people.

The hospitality management case studies indicate:

- most participants undertook the course either to change careers or to move specifically to the hospitality industry;
- while most cast study participants suggested that the Diploma in Hospitality Management was not a pre-requisite to obtaining their position, it was an advantage;
- most case study participants found the Diploma in Hospitality Management useful in helping them develop the range and depth of skills required in their positions;
- most SA DETAFE hospitality management graduates are not employed under an industrial award;
- while formal qualifications may be of some assistance in gaining employment and assisting in promotional opportunities, in the long-run most employers place more importance on experience;
- none of the case study participants had been formally promoted since being employed in their present jobs;
- participants believed that career opportunities arising from completion of the Diploma in Hospitality Management appear limited;
- most participants feel that their career expectations have not been fulfilled as a result of undertaking the Diploma in Hospitality Management;
- in theory all employers have an equal opportunity policy, in practice men tend to dominate the hospitality industry; and
- most case study participants had worked in the hospitality industry either interstate or overseas, voluntarily or from necessity.

6.8 Some general conclusions concerning the outcomes of the case studies

The case studies considered as a group, indicate:

- in general most case study participants undertook their course of study to either improve their career prospects or to change their career paths;
- while the Associate Diploma in Accounting and the Diploma in Hospitality Management were not, in most cases, a pre-requisite for employment, they did assist participants in obtaining their positions. On the other hand, the Associate Diploma in Mechanical Engineering was a pre-requisite for the majority of participants;
- acceptance of the three courses among employers of participants varied significantly;
- most participants are not employed under an industrial award;

- while formal qualifications are recognised as being important by employers, on-the-job training tends to be the most important criteria for career advancement;
- formal promotions amongst case study participants varied significantly;
- career opportunities arising from completion of the three courses appear limited for participants;
- while some graduates' career expectations have been fulfilled, others feel that their courses have not been of significant assistance in fulfilling their career aspirations;
- most case study participants who were employed while undertaking their course were provided with study assistance by their employers;
- while all firms had an equal opportunity policy, men did tend to dominate in particular industries.

7: Some implications arising from the preceding analysis

A number of issues arise from the preceding analysis. These issues include:

- the nature and extent of the employment base available to persons with middle-level training;
- the impact of award restructuring on the employment base available to persons with middle-level training;
- differences between public and private sector recognition of middle-level training;
- recognition of prior learning;
- possible alternatives to existing modes of middle-level training in TAFE;
- articulation between middle-level training and universities;
- a possible need for additional exit points from middle-level training;
- the marketing of middle-level training to employers;
- gender issues arising from the preceding analysis; and
- the need for further research with respect to middle-level training.

7.1 The extent of the employment base available to persons with middle-level TAFE training

The foregoing analysis suggests that a significant employment base exists both in South Australia and nationally for persons with middle-level training. Middle-level vocational training undertaken in TAFE is a common means of entry to the paraprofessional major group in ASCO (notwithstanding the classification difficulties) and the employment of paraprofessionals is significant in South Australia and nationally. The graduate surveys discussed above also suggest that substantial employment opportunities exist in occupations for which TAFE middle-level training results in occupational outlets outside the Paraprofessional Major Group in ASCO (but it is important to recognise the difficulties arising from generalising from small samples).

As discussed previously, econometric models suggest that only limited growth in employment is likely in the next 3-5 years in middle-level occupations for which SA DETAFE provides vocational training. However, award restructuring will influence the growth in this employment base in the next 3–5 years. With respect to the three target occupations:

- Continued growth seems likely in the employment base available to accounting personnel in the next 3–5 years.
- The employment prospects of mechanical engineering associates will be constrained by tariff cuts but could be enhanced by technological change.
- The prospects for South Australia's hospitality industry in the next 3–5 years appear reasonably positive.

7.2 The impact of award restructuring

Award restructuring seems likely to further consolidate the employment base available to persons with middle-level training. The provision of opportunities for career development is a central tenet of award restructuring; redesigned industrial awards specify the vocational training required to achieve various levels of the award. In this context middle-level training has an important role in providing a bridge between entry level vocational training and professional training at universities.

7.3 Public and private sector employment practices

Evidence from the three graduate surveys, the industry surveys and the case studies suggests middle-level training is widely accepted by the private sector in South Australia.

The position is not so clear with respect to the public sector. In South Australia, under Circular 27 issued by the Commissioner for Public Employment, the Associate Diploma in Accounting is recognised for entry to accounting positions, and it appears associate diplomas are widely recognised for entry into technical or engineering positions.

However in the Commonwealth Public Service it would appear that middle-level training is more commonly recognised for entry into technical or engineering support occupations than into non-technical occupations.

In its publication 'Conditions of Entry and Advancement in the Australian Public Service 1991' the Commonwealth Public Service Commission specifies entry standards for a wide variety of occupations, including accountants and technical officers. (No hospitality management occupations are mentioned in this publication.) While positions having the description of 'technical officer' are generally specified in terms of middle-level university/TAFE qualifications (e.g. in terms of completion of Associate Diplomas), entry into accounting positions, in contrast to the position adopted by the South Australian Public Service, requires those selected to hold a three year degree, preferably a degree in accountancy.

7.4 Recognition of prior learning

As award restructuring becomes more widespread, mechanisms will increasingly need to be established to assess on-the-job learning. It is not the purpose of this paper to debate the methods used in assessing prior learning. However, on-the-job learning will increasingly be seen as an integral part of the vocational training system, and include the granting of credit by TAFE for industrial learning experiences. It is hence important that this issue be given urgent consideration to ensure that prior learning is recognised by TAFE in a consistent manner.

7.5 Possible alternatives to existing middle-level training in TAFE

The project profile requested that consideration be given to alternative modes of training. Accordingly, this issue was explicitly addressed in the three industry surveys which form part of this project. While the dangers of drawing general conclusions from specific analysis of particular courses certainly exist, it is noteworthy that, in relation to two of the three courses the majority of survey respondents suggested they would prefer shorter courses addressing specific topics of interest to their organisation.

7.6 Additional exit points/more full-time places

Case study participants frequently referred to the length of their middle-level courses as a substantial barrier to completing their courses on a part-time basis.

Participants frequently suggested that the provision of more exit points, with suitable awards, would have been advantageous to them and would have produced greater incentive to complete their course.

> *It is therefore suggested that SA DETAFE consider the possibility of providing more exit points from middle-level courses.*

The sheer number of students undertaking the Associate Diploma in Accounting also suggests that it may be advisable for SA DETAFE to provide more full-time places in this course to 'clear the backlog'.

7.7 Articulation between TAFE middle-level training and university studies

The three survey questionnaires detailing the labour market experiences of graduates from the Associate Diploma in Accounting, the Diploma in Hospitality Management and the Associate Diploma in Mechanical Engineering included a series of questions concerning graduates' future study intentions.

Responses to these survey questions indicate that a considerable proportion of graduates from the three courses intended to undertake further study, generally at university, (especially younger graduates who had also completed Year 12).

> *A need therefore exists for a mechanism to ensure that all SA DETAFE graduates from middle-level training receive appropriate credit at university for their studies at SA DETAFE.*

This need is even more pressing in the context of award restructuring where the notion of 'career paths' is of central importance and whereby individuals have the opportunity to move from base levels to more senior positions, partially as a result of undertaking vocational training, while receiving the credit at each stage of their career for previous learning experiences.

7.8 Marketing of middle-level courses

The image of middle-level training among South Australian employers appears to be a matter for some concern. Respondents to each of the three industry surveys, generally speaking, suggested they had at least a reasonable working knowledge of the SA DETAFE courses under consideration.

The majority of respondents to the three industry surveys also commented favourably on the material offered in existing SA DETAFE courses, although in some cases survey respondents suggested additional training in some subject areas. (This issue may be partially resolved by curriculum reviews presently taking place in to accounting and mechanical engineering and which have involved extensive liaison with South Australian industry.) Survey respondents also commonly stated that SA DETAFE middle-level training compared favourably with university training.

However, notwithstanding the generally positive perceptions of SA DETAFE middle-level training held by industry survey respondents, the majority of respondents did not actively seek those holding qualifications from the three courses when recruiting or promoting staff. Moreover, most survey respondents valued on-the-job experience rather than academic qualifications when recruiting or promoting staff.

> *This anomaly suggests that SA DETAFE needs to market its middle-level training more effectively, so that the South Australian business community is more appreciative of the benefits of middle-level TAFE training.*

7.9 Gender issues

The major gender issues which are raised by this paper are access to the target SA DETAFE courses, successful completion of SA DETAFE courses and exposure of exploitative employment practices by means of the three industry surveys, the three graduate surveys and the graduate case studies.

In the context of *access* to courses, a significant proportion of students in the Associate Diploma in Accounting and the Diploma in Hospitality Management were female; there were however, relatively few females enrolled in the Associate Diploma in Mechanical Engineering.

> *This suggests that SA DETAFE needs to place more emphasis on marketing engineering studies to female students, to ensure they are not precluded, by narrow, traditional stereotypical attitudes, from the many labour market opportunities that exist in engineering in South Australia.*

In terms of women successfully completing courses of vocational education the study revealed that female graduation rates broadly accorded with enrolments in the hospitality and accounting courses; however review of graduation data from Regency College showed only one female graduate in mechanical engineering. This again

highlights the need to promote female participation in this course.

In terms of *exploitative* practices within industry areas surveyed it is noteworthy that a much higher proportion of females than males in the hospitality industry (for all employees in the industry, not just SA DETAFE graduates) were on a casual or part-time basis, suggesting that females are being underemployed in this industry. This situation was highlighted by case study participants, one of whom suggested that men work as managers, eg by doing accounting, ordering goods etc, while women, at best, get to be supervisors. She said *'Men get the challenging positions'*.

> *This suggests SA DETAFE in its dealings with the hospitality industry needs to promote the idea of greater female participation in full-time positions, especially in a management role.*

7.10 Future research

This paper has addressed a wide variety of issues in relation to middle-level training. In the course of this study however, various issues have come to light which have been impossible to address fully in the context of this project. Outstanding issues include:

- detailing the extent of credit transfer available to TAFE graduates following their middle-level training through TAFE at universities;
- assessing the resource implications for TAFE of increased provision of middle-level courses;
- reviewing the fees payable for undertaking middle-level training through TAFE to ensure appropriate cost recovery; and
- certification issues—who should accredit and certificate middle-level courses in TAFE?

7.11 Some final conclusions

In the past decade middle-level training in TAFE has assumed new importance both in South Australia and nationally. Enrolments in middle-level TAFE courses have grown remarkably in recent years, and with the increased emphasis on providing opportunities for career progression within award restructuring, enrolments in middle-level TAFE courses seem likely to continue to increase in the next 3–5 years.

This report has suggested a substantial employment base available to persons with middle-level training in South Australia exists and will continue to grow in the next 3–5 years, despite the fact that the three industry surveys suggest that South Australian employers do not actively seek persons with middle-level training when recruiting or promoting staff. (Although econometric forecasts suggest employment growth in those occupations for which TAFE provides middle-level training will grow relatively slowly in the next 3–5 years, these forecasts were developed prior to award restructuring. In addition, if South Australia's manufacturing sector is to survive it must embrace with enthusiasm in the next 3–5 years the opportunities provided by technological change. A highly

skilled workforce conversant with modern technology is required to facilitate industry's adoption of new technology. This process will be accelerated by State government initiatives in this area.)

With respect to the three SA DETAFE courses which have been the focus of this report: the prospects for accounting personnel appear reasonable in South Australia in the next 3–5 years; those for mechanical engineering associates are critically dependent on the effects of tariff reductions and the extent to which the South Australian manufacturing sector embraces state-of-the-art technology; and the prospects for the State's hospitality industry appear reasonable.

The emergence of TAFE middle-level training implies a need for clarification of articulation practices between SA DETAFE and universities. This issue needs to be addressed as a matter of urgency.

Finally, while this project has covered new ground in some areas, it has also revealed new issues which need to be addressed. Some of these issues were discussed above. Given the substantial growth in TAFE middle-level training in the past decade, this research needs to be undertaken as a matter of urgency.

End notes

1. For the purposes of this paper, an autonomous employment base is defined as an independent, separately identifiable employment base which exists in its own right because there is a sustained demand in the economy for the skills and services of persons working in a particular occupation.

2. As a general guide, a qualification meeting the standard of Associate Diploma requires a minimum of two years of full-time study or four years of part-time study, while a Diploma requires three years full-time study or six years of part-time study [cf D Rumsey (1991)].

3. Labour Market Analyses Branch, SADETAFE (1991) *TAFE Labour Market Issues*, Issue 4 *Emergence of the post industrial economy - overview*, Vol.1, No. 4.

4. The Australian Standard Classifications of Occupations (ASCO) is divided into the following Major Groups, in descending level of skill: Major Group 1, Managers and Administrators; Major Group 2, Professionals; Major Group 3, Paraprofessionals; Major Group 4, Tradespersons; Major Group 5, Clerks; Major Group 6, Salespersons and Personal Service Workers; Major Group 7, Plant and Machine Operators and Drivers; Major Group 8, Labourers and Related workers.

5. Metal Trades Industry Association and Engineering Employers Association of South Australia, (1988) *Award restructuring in the metal and engineering industry. The way to proceed*, p.1

6. Metal Trades Industry Association, Australian Chamber of Manufactures, Metal Trades Federation of Union, (1990) *Award restructuring implementations manual for the metal and engineering industry, implementing a new classification structure*, 'What is Award Restructuring' pp.3,4.

7. Source: Australian Bureau of Statistics, *1989/90 Australian National Accounts, State Accounts*, Cat. No. 5220.0, Table 13, pp.12 and 13

8. Conversion to 1984/84 prices was achieved by using GDP implicit price deflators (non farm GDP for manufacturing and the GDP implicit price deflator for the overall State economy).

9. In its report entitled *Tourism: An overview of industry structure and employment* (1991) Tourism Training Australia (TTA) expressed similar concerns about defining the tourist industry and noted that the Australian Government Inquiry into Tourism (1986) had faced similar problems (p.1). TTA defined the hospitality industry as including accommodation operators, hotels, restaurants, licensed clubs and other catering establishments.

10. Bureau of Tourism Research (1988), *Hospitality industry labour force survey*, p. 16